

BIOLOGICAL EVALUATION

2008 Cooperative Gypsy Moth Project

For

Central and Southern Indiana

Gypsy moth is moving into northeastern Indiana from the infestations in Michigan and Ohio. Gypsy Moth is also moving into central and southeastern Indiana from Ohio. Its movement is by natural spread and short distance transport by human activities. To detect the introduction of this pest, the State of Indiana has surveyed since 1972. From 1988 to 1998 the survey used a one-mile grid in the northern third of Indiana and a two-mile grid in the remainder of the state. In 1999, Indiana adopted the Slow-The-Spread (STS) survey protocol developed by the USDA Forest Service. Traps are set in detection (2K or 3K) and delimit (250M, 500M or 1K) grids across the state. The 2007 survey set 12,985 detection traps and 3,022 delimit traps.

The STS analysis of the 2007 trapping data identified potential problem areas in five counties in northern Indiana, one county in central Indiana and in two counties in southern Indiana (Map 1). The analysis identified higher or equivalent moth catches in delimiting survey grids placed at each site compared to detections and delimits in prior years. The STS analysis indicates that gypsy moth populations are stable or increasing in the potential problem areas and recommends action.

In Delaware and Scott counties, the mean number of gypsy moths caught in detection traps increased from 2003 to 2007 (Table 1 & Figure 1). The increases in Delaware and Scott counties are all due to gypsy moth catches from the proposed treatment site. The Delaware county site was detected in 2006 and was treated in 2007. The Scott county site was detected in 2002 and treated in 2004 and 2006. High moth catches resulted in an egg mass survey of the sites, during which several egg masses were found.

Map 2 and 3 show the number of gypsy moths detected in each county for 2007 and 2006, respectively. These maps indicate the introduction of gypsy moth into east central and southeast Indiana with Delaware County and Scott County as points of concern.

The moth trapping data of each site can be viewed at the STS website -

<http://da.ento.vt.edu/Region2/d2007/details10-7.html>

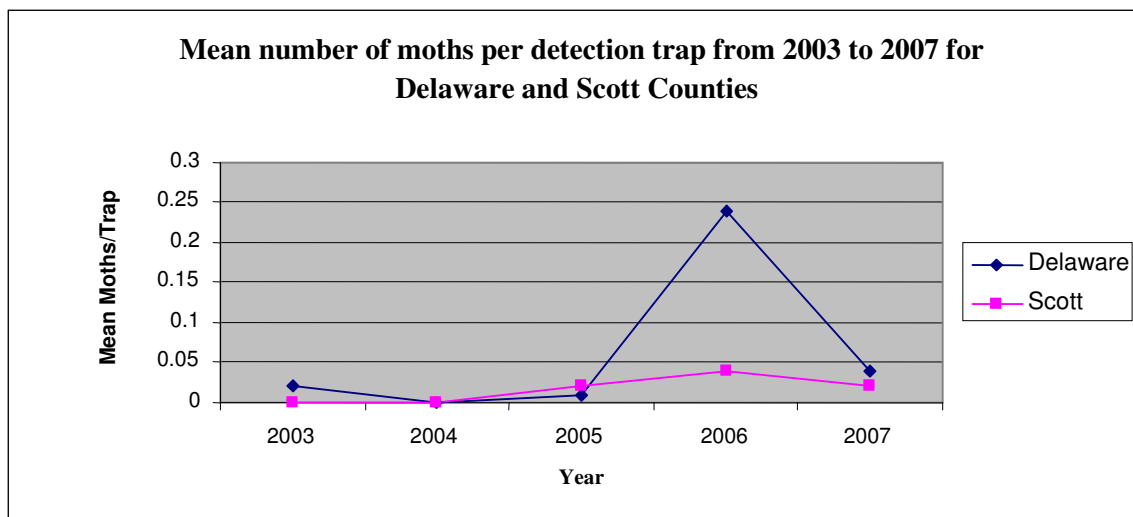
and

<http://da.ento.vt.edu/Region2/d2007/details9-3.html>

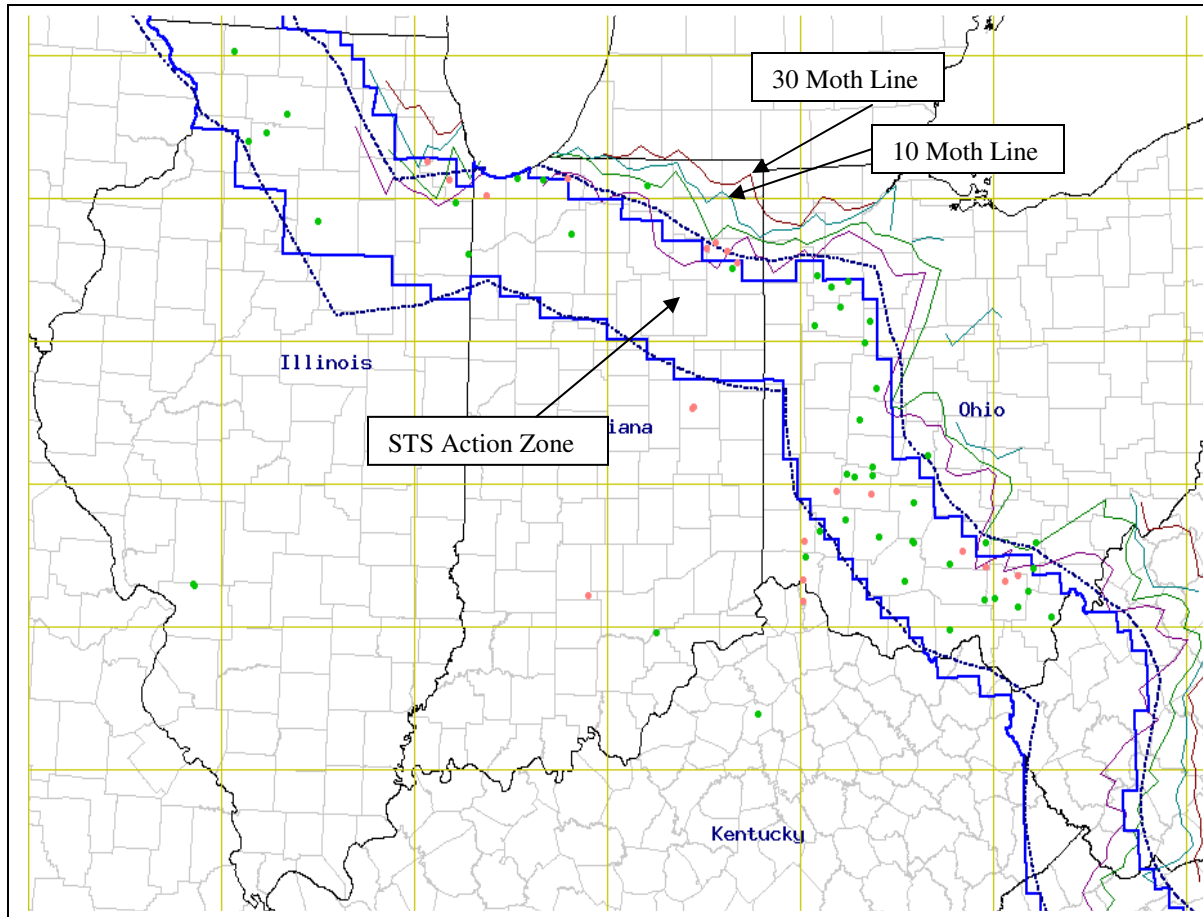
Table 1. Mean number of moths per detection trap in Delaware County and Scott County for 2003 to 2007.

County	2003	2004	2005	2006	2007
Delaware	0.02	0.0	0.01	0.24	0.04
Scott	0.0	0.0	0.02	0.04	0.02

Figure 1. Mean number of moths per detection trap from 2003 to 2007 for Delaware and Scott Counties.



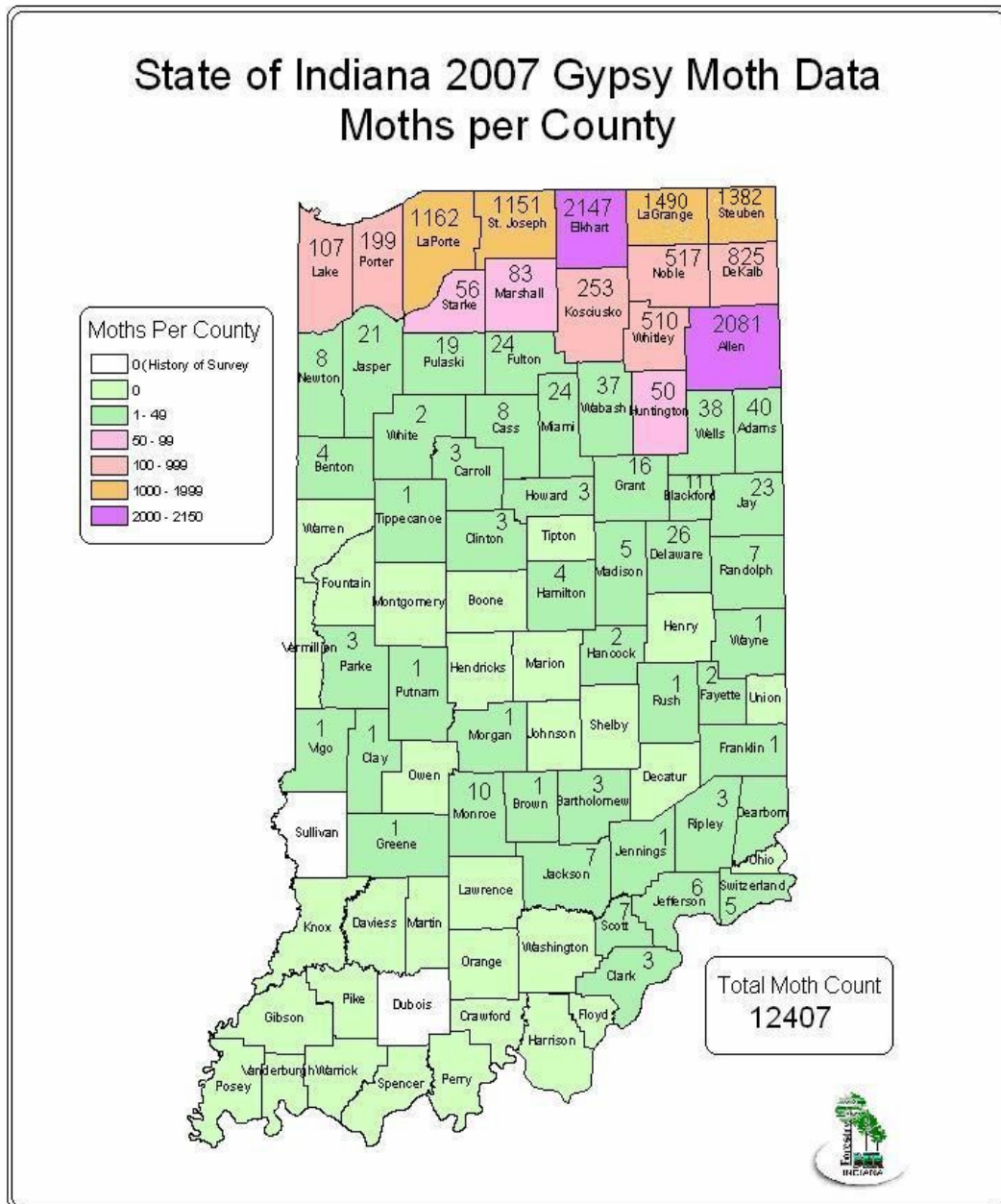
Map 1 Results of the 2007 Gypsy Moth survey showing potential problem areas by Slow-The-Spread analysis for Illinois, Indiana and Ohio (red dots indicate suggested treatments and green dots indicate suggested delimit survey).



- Area suggested by the decision algorithm for treatment
- Area suggested by the decision algorithm for delimiting

- Recommended project boundaries
- State boundaries
- County boundaries
- Boundary of STS action zone in the following year
- 1-moth line
- 3-moth line
- 10-moth line
- 30-moth line

Map 2. Male moth catches by county for 2007.



Map 3. Male moth catches by county for 2006.

